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HPV INFECTION AMONG HIV-POSITIVE WOMEN IN SOME COUNTRIES OF EASTERN EUROPE AND CENTRAL ASIA

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Background: The frequency of detection of HPV varies greatly depending on the region of residence of the woman. Also HIV-infected women have a higher risk of HPV infection than HIV-negative women, and a higher risk of persistence and malignancy.

The aim of the study was: to study the prevalence of human papillomavirus of high carcinogenic risk (HPV HCR) in HIV-infected women in some countries of Eastern Europe and Central Asia.

Methods: 647 HIV-infected women from Russia (RU), Belorussia (BY), Armenia (AM), Azerbaijan (AZ), Tajikistan (TJ) and Kyrgyzstan (KG) were examined from September 2017 to December 2017. All women underwent HPV-test with the determination of 14 types of HPV HCR (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68). AmpliSens reagent kits were used. The results were interpreted according to the instructions to the test systems and the software supplied with them. All women underwent HPV-PAP-test on the basis of liquid technology (Prep Mate + Prep Stain processors, BD, USA).

Results: Among the 647 women surveyed, mostly young people (under 40 y-s) predominated (Table 1). As a result of the HPV-test, 265 (41%) of HIV-infected women were diagnosed with HPV HCR. The percentage of HPV detection ranged from 28 to 48%: Armenia — 39%, Azerbaijan — 43%, Belarus — 28%, Kyrgyzstan — 46.5%, Tajikistan — 37.8%, Russia (Samara) — 48%. All 14 HPV HCR genotypes were diagnosed in HIV-positive women in the region.

Table 1. *Characteristic of patients*

Countries	N	Age (years)			
		Median	Min	Max	(M ± SD)
AM	100	38	23	60	40,11 ± 8,824
AZ	100	35	19	62	36,1 ± 8,26
BY	100	41	18	67	41,16 ± 7,574
KG	99	35	18	51	35,787 ± 6,665
TJ	98	33	21	61	34,091 ± 7,493
RU	150	38	25	55	35,446 ± 5,309
All	647	36	18	67	36,998 ± 7,695

HPV infection was caused by a combination of several genotypes in 49%. The leading genotypes amond 265 HIV-infected women with HPV were: 16 genotype — 26.4%, 31 genotype — 13.6% and 18 genotype — 9.4% (Fig.1).

The distribution of HPV genotypes is different for these countries: 16 and 68 HPV genotypes are registered in Armenia (33.3% and 23%, respectively), in Azerbaijan 16, 18 and 56 HPV genotypes (32.6%, 20.9%, 20.9%), in the Republic of Belarus — 16 (28.6%) and 56 (28.6%), in the Republic of Kirghizia — 16, 31 and 68 (23.9%, 21.7% and 21.7% respectively), in Tajikistan — 16, 31, 56 (29.7%, 21.6%, 21.6%), in Samara (Russian Federation) — 52 and 16 (23.6% and 22.2%) (Fig.2).

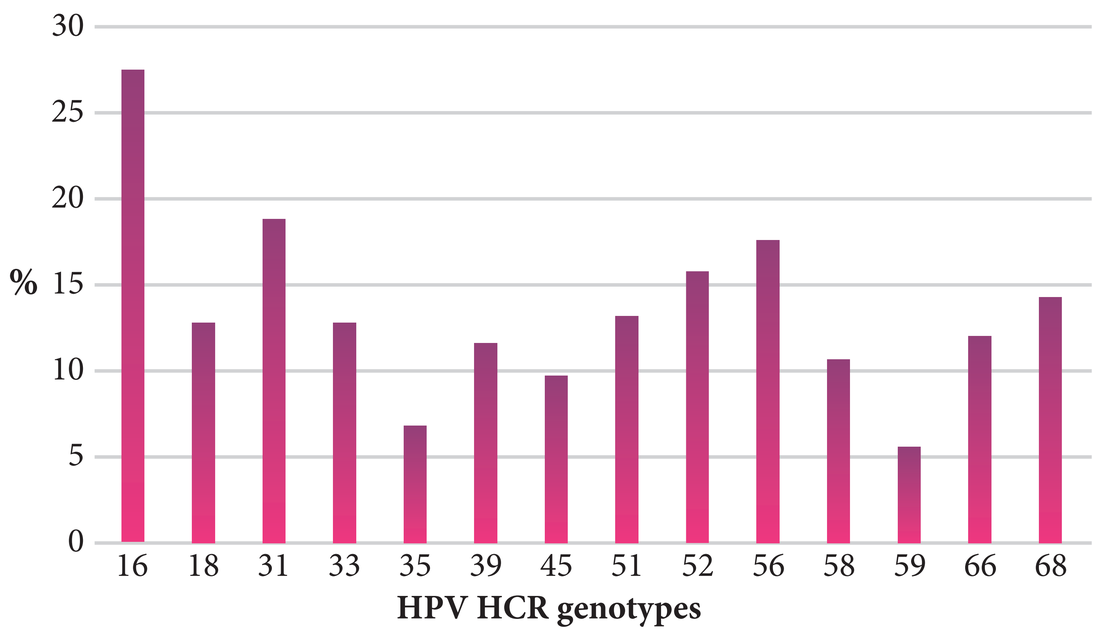

Fig.1*. HPV HCR genotypes in people with HIV-positive women in countries of Eastern Europe and Central Asia*

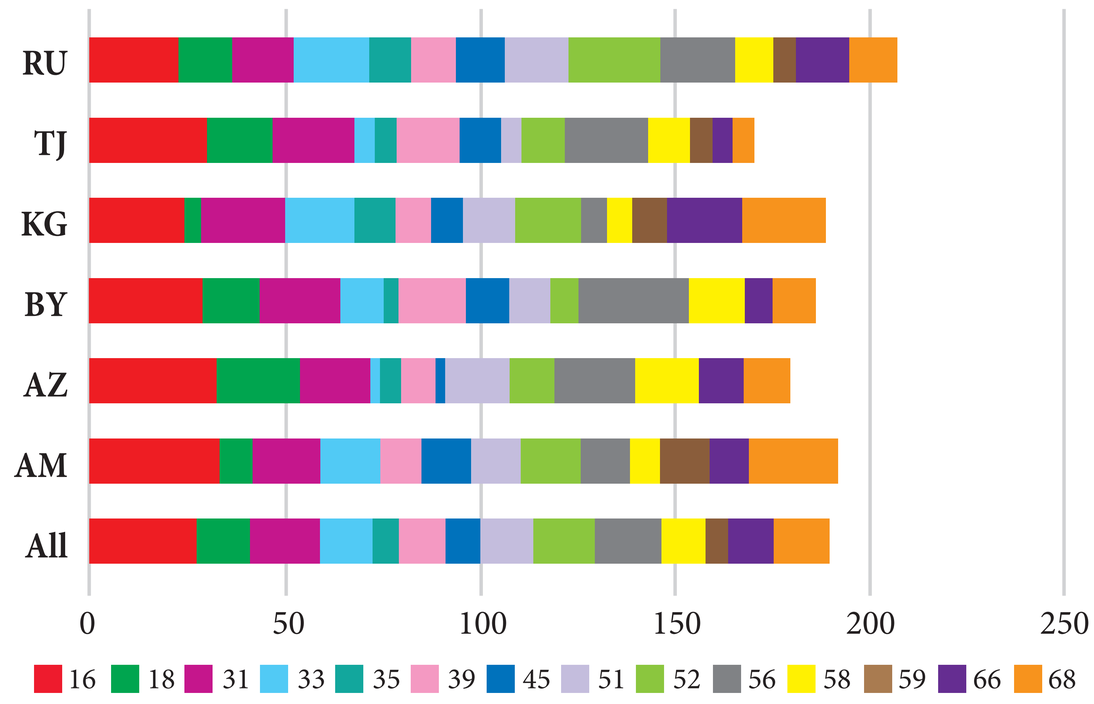

Fig.2*. HPV HCR genotypes in countries*

As a result, 134 (50,5%) of HIV-infected women with HPV HCR were diagnosed abnormal PAP-test: 117 of HIV-infected women with HPV HCR were diagnosed L-SIL or H-SIL.

Conclusion: There is a high incidence of HPV infection in HIV-infected women. Given the high risk of developing cervical cancer and the wide spectrum of detectable genotypes of HPV HCR in this group, it is necessary to use a test system to diagnose the 14 genotypes of HPV. The results should be taken into account when planning vaccination in the region.